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EXAMINER

PILKINGTON, JAMES

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3656

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,328	Applicant(s) SALOMONSSON ET AL.	
	Examiner JAMES PILKINGTON	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 8 is objected to because of the following informalities: Lines 16-17 reads a "releasably connecting/securing a second end of said at least one cable at least one of the" and should be - - releasably connecting/securing a second end of said at least one cable to at least one of the- - to be grammatically correct. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 14-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Nissfolk, USP 6,125,715.

Re clms 1-5, 14-17 and 19-21, Nissfolk discloses an industrial robot having:

- a first part (assembly 6)
- a second part (2), wherein the first part (6) and the second part (2) are arranged to be movable with respect to each other
- a first cable connection/securing point (55/56) arranged on the first arm (6)
- a second cable connection /securing point (42) arranged on the second part (2)

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- at least one cable (35) secured to at least one of the first cable connection/securing point (55/56) and the second cable connection/securing point (42) and releasably connected to at least one of the first cable connection/securing point (55/56) and the second cable connection/securing point (42, both connections are releasable since the cable can be detached from the wire tie and the seals 56), the at least one cable (35) extending freely from the first cable connection/securing point (55/56) to the second cable connection/securing point (42, between the two points the cable is free to move)
- an internal cavity (made of channel covered by 37, space 49 and inside 51), wherein the first cable connection/securing point (55/56) and the second cable connection/securing point (42) are arranged in the internal cavity, and wherein an excess of cable (35) extends freely through the internal cavity from the first cable connection/securing point (55/56) to the second cable connection/securing point (42) such that as the first part and the second part move relative to each other, the internal cavity accommodates the excess of cable moving back and forth between slack and tension (see coil)
- wherein one of said parts [first or second] rotates or pivots about the other part [first or second] (6 rotates about connections on 2)
- wherein one of the parts (6) comprises an electric motor (drive assembly 8, C2/L40-45).

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- wherein said excess of cable (35) forms an arch inside the internal cavity (a coil is a plurality of arches)
- wherein said excess of cable (35) forms a spiral inside the internal cavity (see coil)
- wherein the first and second cable connection/securing points are releasable connected to the first and second parts (the cable can be removed and is connected via a wire tie which can be cut and a seal which can be removed from the outside of the cable)
- wherein the at least one cable (35) transmits electricity, an electric signal, an optic signal, or a substance (c3/L38-41)
- wherein the internal cavity is arranged in the vicinity of a joint between the first part and the second part (see Figure 3, directly above joint)

Re clm 18, Nissfork discloses all of the structure being claimed, see above. The operation of tensioning the cable is merely a process which happens upon the movement of the arm and according to MPEP 2112.02:

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2112.02 Process Claims

PROCESS CLAIMS — PRIOR ART DEVICE ANTICIPATES A CLAIMED PROCESS IF THE DEVICE CARRIES OUT THE PROCESS DURING NORMAL OPERATION

Under the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986) (The claims were directed to a method of enhancing color

In the case of Nissfork the tensioning of the cable happens during normal and usual operation and therefore anticipates the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissfolk, USP 6,125,715.

Nissfolk discloses all of the claimed subject matter as disclosed above. Nissfolk also discloses that the excess of cable (35) extends along an inner wall of the internal cavity (inside the cavity therefore it extends along an inner wall).

Nissfolk does not disclose that the excess of cable is in an s-shape within the cavity.

It would have been an obvious to one having ordinary skill in the art at the time the invention was made to arrange the cable in an S-shape. Since the Applicant is silent to any particular criticality for the cable being in an S-shape any arrangement of the excess of cable would be an obvious matter of design choice. Such an arrangement would yield the predictable result of allowing movement in the cable which then allows movement between the two arm parts.

Claim Rejections - 35 USC § 102 and 103

Claims 8-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nissfolk '715.

Nissfolk discloses or renders obvious a method of connecting at least part of at least one cable (35) between a first part (6) and a second part (2) of an industrial robot which are arranged to be movable with respect to each other where said at least one cable (35) extends from a first cable connection/securing point (55, seal/connection to the first arm part) on the first part (6) to a second cable connection/securing point (40a,40b,41,42) on the second part (2) via an internal cavity (location of spiral), wherein the first cable connection/securing point (55) and the second cable connection/securing point (42) are located in the internal cavity, the method comprising securing a first end of said at least one cable to the at least one of the first cable connection/securing point (55) and the second cable connection/securing point (42), moving the first cable connection/securing point and second cable connection/securing point into a position where they are furthest from each other (to ensure enough cable is present), extending

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a length of cable (35, spiral) freely through the internal cavity from the first cable connection/securing point (55) to the second cable connection/securing point (40a,40b,41,42) and releasably connecting/securing a second end of said at least one cable to at least one of the first cable connection/securing point and the second cable connection/securing point, rotating the parts to increase or decrease the tension on the cable, wherein the cable is an arch, spiral or s-shaped and extends along an inner wall of the cavity.

Response to Arguments

Applicant's arguments filed October 8, 2009 have been fully considered but they are not persuasive.

The Applicant argues that element 51 in Nissfolk is not "the first part" as identified by the Examiner as element 6 and that component 55 and 56 are sealing members not connecting/securing members.

The claim does not define how the cable is connected to the first part. Element 51 in Nissfolk is attached to arm part 6 thus connecting any component within/secured to 51 to the first arm part. Since the claim does not set forth any structural arrangement of the connection this arrangement shown in Nissfolk meets the limitations of the claim. The sealing members do indeed create a connecting/securing point. The sealing members attach the cable to element 51 and ultimately to the arm. The sealing

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members secure the cable within an opening preventing lateral displacement of the cable relative to 51 and 6.

The Applicant argues, with regards to claims 1, 8, 18 and 19, that the cable in Nissfolk does not extend freely through the cavity as described in the specification.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., description of cable arrangement) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, the term "freely" is not limited by the specification to any particular definition of the term. The coil arrangement of Nissfolk is an arrangement which "extends freely through the cavity." Between the two connecting/securing points of Nissfolk the cable is free to move in any direction, it can either coil more, become slack or move up and down.

The Applicant argues, with regards to claims 1, 8, 18 and 19, that Nissfolk discloses that the cable is secured outside of the internal cavity at point 47.

Element 47 is not being relied upon in the rejection above. Since the claim does not define the structure of the connecting/securing points or the internal cavity the two points used in the rejection above are 55/56 and 42 which both lie within the internal cavity which is made by channel 37 and opening 49 in Nissfolk.

The Applicant argues that Nissfolk discloses an arrangement that leads to longer maintenance and repair times in which the instant application avoids.

What the device allows for does structurally differentiate it from the prior art. Nissfolk discloses all of the recited claim structure and therefore meets the limitations of the claims.

The Applicant argues that Nissfolk requires a space behind the motor which the instant application eliminates the need for.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., spacing around the motor) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES PILKINGTON whose telephone number is (571)272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES PILKINGTON/

Examiner, Art Unit 3656

11/9/09

/Thomas R. Hannon/

Primary Examiner, Art Unit 3656